THE LEISURE HOUR.

BEHOLD IN THESE WHAT LEISURE HOURS DEMAND,
AMUSEMENT AND TRUE KNOWLEDGE HAND IN HAND.—*Cowper.*

AT THE ROADSIDE.

"ENGAGED TO BE MARRIED."

CHAPTER III.

LIZZIE Moore sat in her room alone. No other word had passed between her aunt and herself, but the subject of their conversation had not been much out of her thoughts, and never out of her prayers. She was feeling somewhat sad, but she knew that the decision she had made was a right decision; the painful part was how to make it public without wounding too deeply.

She had known Fred Saunders so long—indeed, she had been as intimate with him as with a brother. She could not deny that he was a merry, genial, open-hearted young man, a favourite with all who knew him. She had witnessed his devotion to his mother in her weakness, and many there were ready enough to bear witness to his general kindness of heart. She remembered, too, with a flush of pleasure, how much

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PRICE ONE PENNY.

had been said of the brave way in which he had saved from drowning two tiny children who had toddled over the river's brink. She had treasured all these things concerning him in her heart; and she felt now that if she had a preference for any young man in the world, Fred Saunders was that young man.

But Lizzie knew something else concerning her early friend besides all this. She remembered that once and again, when she had been with her uncle to the town, they had met him; she had seen that his face was flushed, his eyes bright, his voice loud, and his manner bold and excited. She had at those times heard her uncle remark, "I am afraid Fred has been dining at the public table to-day. I am glad the boys are not so intimate with him as at one time."

Lizzie remembered, too, on the last jaunt of the kind what had pained her even more than these words, though it escaped her uncle's notice. They had to pass a roadside inn on their homeward journey, and Lizzie saw at a glance that Mr. Saunders's horse was tied at the gate, while at the open window his master made one of a numerous company of revellers. No one guessed how full her heart was that night of yearning and longing to save. The road he was treading would surely lead to destruction and death, and he was her early friend.

So, though Lizzie was sad, though she had been almost angry with herself to find she cared so much for him, and in spite of her admiration for all that was noble and good in him, she knew there was only one thing she could do; she must write and decline his advances. "I dare not do evil that good may come," she whispered to herself.

By-and-by, when the house was still and quiet, Lizzie sought her aunt, and placed in her hands an open letter. She looked grave and quiet, and longed for the sanction of those she most loved on earth; and her aunt's kisses and the warm clasp of her uncle's hands afforded her no small share of comfort.

This was Lizzie's letter:

"Taynton, June, 1868.

"Dear Sir,—My aunt has told me what you wish me to understand respecting the kind feeling you have towards me; and I am very sensible that you have done me a great honour by the expression of it. You were always good and kind to me, and I am very sorry to do or say anything which may cause you even a temporary pain. I feel, however, that I should be guilty of a great wrong, both to you and myself, if I accepted your proposal without entertaining for you very different feelings to those which at present exist in my heart. I am therefore obliged to refuse your offer, while I thank you heartily.

"Will you allow me to say a few words to you on the strength of our childhood's friendship? I remember the day when you came in such sorrow to tell us of your mother's death. She had given you her little Bible with her dying, trembling hands; and the last words she had uttered were, 'My boy, read the marked place every day.' You said you had looked in vain for any marked place, and you thought she had been wandering. As I turned over the leaves of the book, I came upon a verse the words of which were underlined in ink, but I had no opportunity of pointing them out to you, as I was called away.

"Dear sir, bear with me a little, and forgive me. I had seen you only a few weeks before coming home from Singleton market, and that verse seemed to show your mother's yearnings over you in that last sad hour of her life; and it told all her fears also.

"Dear Mr. Saunders, if you have not yet found it, the marked verse is 1 Pet. v. 8.

"I remain, yours very sincerely,

"Lizzie Moore."

The next day the letter was dispatched, and delivered to Mr. Fred Saunders as he was sitting at tea in the farm kitchen. The room was low but large, with a broad casement window at one end, around which the woodbine and the red rose climbed and twined in luxuriance. The red tiled floor, the snowy whiteness of the table and dresser, the shining ware on the shelves, and the bright tins and covers here and there, all made a glowing picture of country sweetness and comfort, while the country plenty was represented by the loaded bacon-rack suspended from the ceiling, and sundry hams which kept it company.

I have said that Mr. Fred Saunders was a great favourite with all who knew him, but I have not said that he was proud of his popularity. He had been the dear and only child of a very fond mother, whom it had seemed impossible to spoil. His nobleness, frankness, and open bearing endeared him to all hearts, and he had grown up to manhood with the assurance that what everybody said must be true, and that he was altogether a very respectable specimen of humanity indeed.

He had received one letter before that day. The morning's post had brought him an epistle signed by some of the most influential farmers in the neighbourhood, asking him to become the chairman of the Farmers' Club. "We never had so young a chairman before," the letter went on, "but we all feel you are such a thoroughly good fellow, and are so capable of putting a good deal of life into all you undertake, that none of us older birds would have a chance against you. So we hope you will do us the honour of becoming our chairman, and in some measure, at least, will restore the club to its old popularity and success."

Fred knew very well that his compeers had done him very great honour by the offer; and as he took his tea his thoughts ran something in this fashion:

"I suppose *I am* rather a popular fellow, and I hope a certain little maid of my acquaintance will think so too. I would sooner be chosen president by her than made chairman over a hundred clubs. I don't think she will say 'no' to me, unless her friends make her afraid to say 'yes.' If she accepts me I shall refuse every other honour, and become a quiet stay-at-home, and stick to business."

It was just at this moment that Lizzie's letter was brought by the messenger and handed to him by the housekeeper.

Mr. Saunders read it once hurriedly, then again more deliberately. Her friends had influenced her, he was certain, and all because he was "such a thoroughly good fellow." No other person had a word to say against him, except the one whose good opinion he most valued. Well, he should get over it, he did not doubt; he should find some one who would value him yet.

Fred did not look for the marked text; his pride was wounded; and, nettled and annoyed, he wrote a letter accepting the honour offered by the Farmers' Club, hoping it would be a long time before he should forfeit their good opinion of him, of which he assured them he was justly proud.

And from that time he became in their estimation a thoroughly good fellow indeed. His were the wit-

tiest sayings, the merriest jokes, the most open-handed generosity. He never missed the meetings or the market dinner, and devoted far more time than he could really spare from his business, to the work of making the club as popular as he was himself.

But far more often than Lizzie could have deemed possible, after those meetings and dinners, his condition more nearly resembled that of a drivelling idiot than the glorious specimen of humanity nature had fitted him to represent.

Lizzie received no sign as to the effect of her little arrow sent forth at a venture. Once Mr. White had met him in a far from natural condition, and Fred had said something about "Miss Moore standing in her own light." The worthy blacksmith's answer to him deserves to be recorded. "Well, Fred, it may be so; but I don't know but that the position rests the eyes sometimes; and if only the work in hand fares none the worse for the shadow, we generally turn round again with a clearer vision."

But Lizzie knew nothing of this. She missed him often at church; and when he was there he did not linger as of old to exchange friendly greetings, or to walk a little way at their side. She was disappointed that he was offended at her letter. She had not calculated that they must now have nothing to do with each other. And though she grieved over the breach made, she knew she had no power to heal it.

CHAPTER IV.

Lizzie did not go to Singleton for a long time after writing that important letter. Everyone was so busy with the haymaking and the harvest, that the time seemed to pass more quickly than usual.

One day early in October, however, she and her uncle started with so many commissions to execute, and purchases to make, that she laughingly told her aunt they would need a train of camels to bring all the goods home.

She made a pretty picture as she stood at the horse's head; her bright, fresh face; her spotless and becoming grey dress; her round straw hat, with its green leaves and daisy-buds, and the delicate pink about her throat; but Lizzie did not guess the admiration there was mixed with the good-bye kisses she got.

It happened that her uncle's business detained him longer than usual; and Lizzie having made her purchases, wandered into the quiet churchyard to rest. As she sat in the church porch she could see the road which led to their own village, and various vehicles from time to time would rattle past, bearing their occupants once more homewards. Presently she became alarmed at the clatter of a horse's hoofs going at a desperate rate over the stones, and a horseman dashed by.

Lizzie's heart ached with a bitter pain as she saw it was Mr. Saunders. With flushed face, bleared eye, and rocking body, he goaded the animal he rode yet faster, while it seemed to her he could scarcely keep his seat in the saddle. His face was turned towards her, but she knew he did not know what his eyes rested on. Poor Lizzie! She sat still, and thought sad thoughts. Her mind wandered back to the day when he was her favourite friend, a bright and merry boy, full of promise for the future, and the darling of his mother's heart—and now!

She felt sure his mother at the last had feared this for him some time before she died. She remembered one day when she called with her aunt during the last illness, that their pastor, Mr. Mason, had come and read the office for the Visitation of the Sick. The sufferer seemed especially struck with one beautiful little prayer in that service: "O Saviour of the world, who by Thy cross and precious blood hast redeemed us, save us and help us, we humbly beseech Thee, O Lord!"

They were short of nurses that day, and her aunt left her there for a few hours to relieve the one who had been up all the previous night. And Lizzie heard in the still hours the failing lips whispering over and over, "O Saviour of the world, who by Thy cross and precious blood hast redeemed him, save him and help him, I humbly beseech Thee, O Lord." And Lizzie felt the prayer was for her son.

And then the marked text, too, which perhaps he had never read. Oh, how her heart went up in prayer that some hand might yet be stretched out to save him in the downward path he seemed bent on pursuing, that he might be saved in spite of himself.

Soon her uncle came to "pick her up," and he was so much occupied with the news of the failure of one of the principal ironfounders, that he did not notice her unusual gravity and abstraction. They had not proceeded more than three miles of their journey, however, when he discovered that the horse had cast a shoe.

"What is to be done now, Lizzie?" he said. "We cannot drive the poor beast the other four miles without one, and in the stoniest part of the road too; he would be altogether lamed, you see. 'Shoemakers' children and blacksmiths' horses are always the worst shod.' You know this comes of not looking to him myself. I think you must walk gently on, and I will turn aside to the nearest blacksmith's, and give you the meeting at the cross roads farther on; it will not take very long; I shall be there nearly as soon as you are."

Lizzie felt very glad of the chance to be alone; her thoughts were as sombre as the day was becoming. She walked gently along the road, now and then stopping to pluck a bright red leaf, or a piece of fresh fern, or a late forget-me-not, and all the time thinking of the blessed days when the Master walked about the world, and the friends of the sick folk could lay them before Him, and get them cured by His merciful power.

She had gone nearly two-thirds of her course when a bend in the road revealed close to her a sight which made her heart sick with fear.

By the side of the road on the greensward was a pool surrounded by rushes and rough grass, and near the pool a heap of ready-broken stones for mending the road. Lying on his back, with his head resting on these stones, was Mr. Fred Saunders, while his horse stood quietly grazing close by with the bridle dragging in the dirt.

A very little time passed before Lizzie saw this was no very bad accident. Her sometime friend had evidently fallen from his horse, for his clothes were dirtied, and his hand was cut and bleeding, but he was too stupid to care about pain or appearances, and lay in a heavy drunken sleep, incapable of any further effort.

Fred Saunders had been called the handsomest young fellow thereabouts, and with good reason. His countenance was open, his complexion fair and fresh, his eyes blue and fearless, his brown hair and whiskers rich and luxuriant, while his broad chest

and tall form recalled to the mind St. Paul's words, "The glory of young men is their strength."

And he was always particularly careful over his dress; indeed he was never seen but the extreme neatness of his attire attracted attention; he was by no means foppish, but whatever he wore seemed to borrow elegance from the way he put it on.

All this passed through Lizzie's mind as she stood and gazed down on him. There he lay; his hat off and lying crushed in the mud, his clothes plastered with dirt, and his brown hair bespattered with mire.

His face, all swollen and puffed, was turned up to the pure blue sky; and the grey clouds parting, the sun suddenly looked out and sent his rays full upon him. His eyes were closed, but every feature seemed distorted and disfigured, and smeared with blood from his wounded hand, which now lay across his breast, resting against his usually spotless collar and dainty necktie.

Lizzie shuddered as she gazed, and then, while the tears fell fast and thickly from her eyes, she uttered aloud in her distress the words so lately on her mind, his dead mother's words, "O Saviour of the world, who by Thy cross and precious blood hast redeemed him, save him and help him, I humbly beseech Thee, O Lord."

And then there came into her heart a burning shame lest any other eyes should gaze on him in his degradation and debasement, and conscious only of a desire to hide his features, she drew from her pocket one of her own soft handkerchiefs and spread it over his face, then taking the little silk scarf from her throat, she bound up the poor bleeding hand. Her next care was to lead the horse to a gate near, and make him fast lest he should have strayed beyond recall when his master woke up and needed him. Then she hurried on to meet her uncle, and it was not till she was seated by his side again that she remembered she had left one of her gloves and gathered ferns beside the crushed hat. Poor Lizzie Moore! never before had she gone to her home with such a sorrowful heart.

UTOPIAS, OR SCHEMES OF SOCIAL IMPROVEMENT.

BY THE REV. M. KAUFMANN, M.A., AUTHOR OF "SOCIALISM: ITS NATURE, ITS DANGERS, AND ITS REMEDIES CONSIDERED."

XIII.—KARL MARX AND THE INTERNATIONAL.

KARL MARX is a star of first magnitude among the constellations of modern Socialism, but, in some respects, resembles Byron's "melancholy star,"

> "Which shines, but warms not with its powerless rays;
> A night-beam sorrow watcheth to behold,
> *Distinct, but distant—clear, but oh, how cold!*"

The warmth of enthusiasm which characterises most social idealists is wanting in Marx. He exhibits but little feeling, except it be the bitterness of indignation and disgust at existing social conditions and the attempts made for their justification. When dwelling on these, his pen, indeed, is often "dipped in the poison of polemical acidity," but, generally speaking, his style is bald and dispassionate. However, if there is an absence of emotional sentimentalism, there is a great deal of hard thinking and plain speaking in the writings of Karl Marx. He gives us a clear exposition of social evils following in the wake of our modern industry, founded on facts and figures, and mainly drawn from official reports and Parliamentary inquiries. Declamatory phrases and sweeping assertions are carefully avoided, and Marx's statements, if not always taking in the whole truth, are, at least, trustworthy as far as they go, and though he presents us exclusively with the dismal side of contemporary social life, he cannot be accused of wilful misrepresentation.

As he is clear in his statement of facts, so, too, Marx is rigidly logical in his deductions from the first principles of political economy, which he accepts from the old masters. Thus, for example, from their dogma that labour is the source of all values, Marx arrives, in pushing the argument founded on it to the farthest extremity, at the conclusion that all appropriation of wealth on the part of those who do not work must be malappropriation.

So, again, he endeavours to lay down, with almost mathematical precision, the theory that the growth of capital is entirely due to the insufficient remuneration of labour; that the difference between the value of work done, and the amount of wages paid, is the profit fraudulently obtained by the capitalist at the expense of the labourer. Marx accordingly arrives at the conclusion that all the produce of man's work ought to be divided among the workers of society, and looks forward with equanimity to the abolition of the class of capitalists in the course of a revolution which shall sweep away our present social system in favour of Communistic institutions.

Unfeeling in his theories, and unflinching in drawing his conclusions, Marx may be called a Socialist Cato, whose motto is, "Society must be destroyed."

In one of his manifestoes he acknowledges, "Our objects can only be attained by a violent subversion of the social order."

Social reforms he regards as a mere farce, and the efforts of trades' unions to bring about a satisfactory adjustment of the claims of capital and labour he calls treason. What he wants is not reconciliation of conflicting interests, but war to the knife against capitalism, which is to end in the triumph of labour. To bring this about, he appeals to the united effort of all the workmen throughout the civilised world. "We must appeal to force," he says, in the congress of the Internationalists at the Hague, "to establish the rule of the labourers."

There is a remarkable contrast between the character and aims of the two most prominent leaders of Modern Socialism—the genial, warm-hearted, boisterous agitator, Ferdinand Lassalle, and the cold, sullen, and almost insensible theoriser, Karl Marx. The former is a patriotic Nationalist, and a believer in State Socialism; the latter a cosmopolitan Internationalist, and a believer in the most abstract form of universal Communism. Centralisation of State power to bring

about social changes in favour of the labourer is the ideal of Lassalle. Decentralisation and a network of independent communes all over the world, or, at least, a confederacy of European republics, form the Utopian vision of the latter. If Marx surpasses Lassalle in his breadth of view, taking in the whole social world at a glance, whereas the latter confines himself to the task of regenerating his own country, Lassalle, in the warmth of his human enthusiasm, glowing impulsiveness, and generous impetuosity, compares very favourably with Marx, who is "ever calculating, absorbed in subtilties, cold and reserved, drawing his life-breath, as it were, in the icy regions of an abstract cosmopolitanism."

Lassalle inspires personal interest, Karl Marx claims distant regard. But it is important to make his personal acquaintance now, before we enter upon his theory.

Marx was born in Trêves, in 1818, the son of a director of mines, and was married to a sister of a reactionary Minister of State; and thus he belonged by birth and marriage to that small band of "middle-class dreamers and theorists" who of late years have become the most bitter opponents of the *bourgeoisie* with which they are connected.

He received his academical education at Bonn and Berlin, where he studied law and philosophy with a view to qualify himself for a State appointment at one of the Universities. But circumstances or the bent of character drew him away from this course. He came to be a contributor, and presently sole editor, of the *Rheinische Zeitung* ("Rhenish News"), which in its Radical tendencies represented the rising Social Democracy of Germany before 1848.

Such were the bold attacks levelled in this paper against the reactionary measures of the Government, that a special Royal Censor had to be sent from Berlin to revise its columns, and when this proved fruitless, its publication was stopped altogether by order of authority in 1843.

The political struggles and economic controversies of the day led Marx to the study of social questions, and he went actually to Paris for this purpose. One of the results of these studies was a critique of Proudhon's "Philosophy of Misery," entitled the "Misery of Philosophy," which indicates the line of thought on the labour question developed in his later writings. About this time appeared the work by a congenial spirit, who has since become the most faithful satellite of Marx, the book of Friedrich Engels on the "Condition of the Operative Classes of England." Similar social views attracted the two men towards each other, and in the same year they published conjointly the "Manifesto of the Communist Party," which was adopted by a congress of labourers, held in London, and was translated into several European languages. It contains ideas on the unhappy condition of the Proletarians, and a historical criticism of society similar to those with which we have become already familiar in previous papers, and concludes: "Communists discard the idea of concealing their views and intentions. They declare it openly that their objects can only be attained by means of a violent subversion of existing social order. Let the ruling classes tremble before the Communistic Revolution! The Proletarians have nothing but their chains to lose in it. They may win a whole world. Proletarians of all countries, unite yourselves!" No wonder Marx was considered a dangerous subject after this. "Ever plodding and suspected," he was driven from one city to another. He was expelled from Brussels during the revolutionary panic of 1848, and though invited to Paris by the Provisional Government, found it soon advisable to quit France and to return to Cologne, where, in conjunction with friends, one of whom was the youthful Lassalle, he founded a new *Rheinische Zeitung*, which became the organ of the Revolution. Its publication was again stopped by Government, and Marx was ordered to leave the country. He went to Paris and was expelled thence, and at last came to London, the home of so many exiles, where he has lived ever since, in comparative seclusion and learned ease, surrounded by a circle of admiring disciples, who serve as a ready medium for communicating his ideas and conveying his orders to the Socialistic associations of the Continent.

Karl Marx continued at the British Museum library his economic studies, which resulted in the publication of an important work in 1859, a contribution "towards a critique of Political Economy, etc." It received further expansion in Karl Marx's *magnum opus*, "Das Kapital" (Capital), a second edition of which, published in 1872, enjoys a large circulation, has been translated into French, and forms the text-book of Modern Socialism. It is a work praised by friend and foe alike for the intellectual vigour, critical acuteness, and diligent research it displays, and an opponent of Marx's theory calls it "the greatest scientific production of modern German political economy." In this work are contained the theoretical views of Marx on the undue growth of capital and the wrongs of labour. It is the first instalment of a complete work on capital, to be succeeded by two more volumes, the publication of which is delayed by the ill-health and multifarious occupations of the author.

Marx then comes before us in the twofold character of Socialistic theorizer and International agitator. His ideas on a speculative social philosophy may be drawn from his work on capital, as this contains his criticism on existing social order, whereas his positive proposals are to be gathered from the several programmes, statutes, and manifestoes of the party, which we are assured by his friend Engels have all been published under his direction, or have received at least his final revision.

Not to weary the reader with the elaborate statement of the first or critical exposition of Karl Marx's theories, we will only give a short abstract of his description of modern Proletarians in England, together with the causes he assigns for this phenomenon in its close connection with the "Genesis of Capital," and then proceed briefly to point out the remedies suggested by Karl Marx and his party from their own published documents, which may be regarded as the latest schemes of social improvement up to the present day.

Dull and dismal, indeed, is the picture drawn by Karl Marx of real life among the English poor in town and country. He quotes from Dr. Hunter's report, made by order of the Privy Council (1862-63), on the condition of the agricultural labourer, the following passage:—"The means of existence of the hind are fixed at the very lowest possible scale. What he gets in wages and domicile is not at all commensurate with the profit produced by his work. His means of subsistence are always treated as a fixed quantity; as for any further reduction of his income he may say, '*Nihil habeo, nihil curo.*' He is not afraid of the future; he has reached zero, a point from

which dates the farmer's calculation. Come what may, he takes no interest in either fortune or misfortune." As far as the present writer's experience as a country clergyman serves him, he must confess the condition of the agricultural labourer as here described has not much improved in the south-western counties of England, at least during the last fifteen years since this memorable report.

On the slow improvement in the condition of the factory "hands," notwithstanding the enormous growth of wealth in the country, speeches of Mr. Gladstone and Mr. Fawcett are quoted in attestation of this melancholy fact. In 1863 Mr. Gladstone had said: "The fact is astonishing and scarcely credible, of this intoxicating increase of wealth and power confined entirely to the possessing classes. But it must be of indirect advantage to the labouring population, in cheapening the ordinary articles of consumption: . . . that the extremes, however, of poverty have been modified, I dare not say." Speaking of the masses on the brink of pauperism, of branches of trade where wages have not risen, he concludes by saying, regarding the labouring classes generally, "that human life, in seven cases out of ten, is a mere struggle for existence." Then Professor Fawcett, who according to Marx is reasoning in a similar way, but uses plainer and more outspoken language, unfettered as he is by official reserve, declares "the rich are becoming rapidly wealthier, whereas no increase can be discerned in the comforts of the labouring classes. The means of livelihood are getting dearer, and working people become almost the slaves of those petty tradesmen whose debtors they are."

What is the cause of all this? Whence this constantly increasing chasm between unlimited accumulation of wealth on the one hand, and the increase of abject pauperism on the other? How is it that this age of progress has developed these dangerous extremes of luxury and misery? To this Marx replies that the growth of capital is entirely owing to the systematic appropriation of the surplus value of labour by the capitalist, and the inability of the labourer in his abject condition to defend himself against this systematic spoliation. He quotes with approval the words of the English Socialist, J. Bellers, pronounced more than two hundred years ago: "The labour of the poor represents the gold mines of the rich." Thus he considers that the creation of private fortunes is entirely brought about at the expense of wages labour. Profit is nothing else but unpaid labour. Wages do not represent the value of work rendered for which they are presumably the reward, but are only equal in value to the bare necessities required for the support of the labourer. In order to this, some of the necessaries of life, such as bread, fuel, etc.=(A) must be renewed daily, another part = (B) weekly, and a third = (C) monthly, in given quantities. Thus Marx puts the following formula as representing daily, *i.e.*, necessary wages $= \frac{365\,A + 52\,B + 12\,C}{365}$

Now, he says, although six hours' work daily might suffice to produce a value equal to this, still the labourer must work for his employer twelve or sixteen hours in order to receive a remuneration tantamount to it. Since labour must seek for employment, and in the struggle for existence must accept the lowest possible remuneration, the working man, instead of receiving the full amount of the produce of his labour, must be satisfied with a sum just sufficient for his maintenance. What remains over and above this only serves for the augmentation of wealth in the hands of the capitalist.

In fine, Marx maintains that capital is the most terrible scourge of humanity, that it fattens on the misery of the poor, the degradation of the worker, and the brutalising toil of his wife and children; that just as capital grows so grow also pauperism, that millstone round the neck of civilisation, the revolting cruelties of our factory system, the squalor of great cities, and the presence of deep poverty seated hard by the gates of enormous wealth.

He shows from the history of factory legislation, and the reports of factory inspectors, the inhuman treatment of the "hands" by the employers before Factory Acts came into operation, and their repeated attempts to elude the provisions of the law for the protection of labour, so as to extort the greatest amount of work, on the principle that "moments are elements of profit," and that the prolongation of the labour day, even by a few minutes a day, means an increase of thousands of pounds in the annual profits of the employer.

In the same way Marx shows that the much praised subdivision of labour only serves to brutalise the labourer and to render his condition more deplorable than it was before the introduction of machinery, whereas it at the same time consolidates the irresponsible domination of capital and its power to multiply itself *ad infinitum*. He goes on to show that in the case of industry carried on with the help of machinery, which in a great number of cases becomes a simple substitute for manual labour, the danger exists of dispensing altogether with muscular strength, and substituting the labour of the weak, the immature, and those of tender age, *i.e.*, women and children. Thus the rate of wages is depressed, and the profit arising from underpaid labour flows into the pockets of the employers. Marx quotes from official sources the most astounding facts, showing the amount of misery and mortality and destruction of the family life resulting from this fact. The mortality of children is greatest where women are employed in factory labour, and where the children, from want of proper food and the use of opiates, and in some cases even intentional starvation and drugging, become the victims of unnatural parents. On the other hand, the same official reports show how, in agricultural districts, where but a very small number of women are employed, the mortality of children is less in proportion. "It will be in fact a blessing," says one of the inspectors, R. Baker, in his official report, "for the manufacturing districts of England, to forbid every married woman who has a family to work in a factory."

He also alludes to the painful results of every transition state, occasioned by the introduction of new machinery, which throws so many labourers out of employ. In answer to the apologists for industry by machinery, who maintain that this is not the fault of machinery itself, but its employment by capital, Marx has a ready retort. "So then," he says, "because machinery, considered by itself, does shorten the hours of labour, whilst in its employment by capital it lengthens the labour day; because in itself it lightens labour, but as used by capital it intensifies toil; because in itself it represents the victory of man over nature, but as applied by capital it subdues man under the dominion of nature;

because in itself it increases the wealth of the producer, but as used by capital it impoverishes him, etc., etc., *therefore* the political economist simply explains that machinery considered by itself plainly proves that these palpable contradictions are mere appearances, but have in reality and in theory no existence. Thus the political economist does not trouble himself any further, but calls his opponent stupid for opposing machinery as such instead of the capitalistic mode of its application."

Again Marx dwells on the evils of "starvation diseases" consequent upon insufficient nourishment and the cruel waste of human life occasioned by over-exertion in labour hours and the unhealthy condition of the workman's dwelling-place, and insists on the appointment of a normal day of labour by State authority, sanitary laws, and improved education, to prevent the further decay in body and mind of the working classes.

At the same time he holds out little hope of gaining much for the labourers by such legislative expedients. He looks forward rather with grim satisfaction to the time when, with the farthest extension of the present unhealthy development of capital, a reaction will set in at last, a convulsion will take place, and those who have all along appropriated to themselves the results of other men's labours will themselves be dispossessed, and those who are now despoiled will in turn occupy their places. He regards the growth of wholesale trade, and the gradual concentration of the land in the hands of a few large landed proprietors, as a school of Communism, which also requires large bodies of men engaged in the same pursuit to work in companies by means of subdivision in labour under a central authority. The only change required consists in the change of government. The "monarchical head" (*i.e.*, the wholesale manufacturer and large landed proprietor) is removed, and the machinery can go on just as before, only under different directors. The servants becoming masters, distinctions between employer and employed are removed altogether; the many, and not the few, will rule.

The present process of extinction of all small holders of land and capital in their competition with agricultural and mercantile magnates, and the concentration of all property in a few hands, will speedily be accomplished, and with it the impoverishment and degradation of the people, who, exasperated at last, and disciplined for resistance by reason of intolerable grievances, will turn against the oppressors and spoliators. Then comes the deluge. "The expropriators are expropriated. There is less difficulty in this than in the former process of spoliation. In the former case, it was a question of expropriation of large masses of the people by a few usurpers; now it is only a question of expropriation of a few usurpers by the mass of the people."

In thus deducing from existing circumstances the future abolition of private property in favour of the people, and the substitution of collective property and co-operative universal labour on scientific principles, not, as "now, for the aggrandisement of the few, but for the common good and comfort of all that toil," Marx differs from those Communists whose Utopias have been already considered. They pictured to themselves a state of things when human beings are quite different from the men and women we meet in daily life, whereas Marx takes the world as he finds it, and looks upon the evolution of Communism out of our present social condition as unavoidable, according to the laws of natural development. He regards without emotion the advancing wave of anarchical tendencies which are to bring about a transitional social catastrophe. He is satisfied to be both the prophet of evil, announcing the decree of the Nemesis of history, which sweeps away our old institutions, and the "bringer of good tidings," proclaiming the advent of a new era, when, with the enjoyment of perfect material equality, the evils prevailing among ourselves will be banished from human society.

Marx, in his imperturbable calm, thus foreseeing coming calamities to the human race in order to its final regeneration, appears to us in the light of those "idealists who create a political terror; they are free from all desire for bloodshedding; but to them the lives of men and women are accidents; the lives of ideas are the true realities; and armed with an *abstract principle and a suspicion*, they perform deeds which are at once beautiful and hideous."

Happily Marx has not been as yet tempted to deeds, and we are simply confined to consider and judge him by his words.

We ask what, then, are the means to bring about that happy condition in the society of the future which Marx and his followers wish to see realised? What is the latest scheme of social improvement presented for our examination in the successive official documents of contemporary Socialists? To answer this question we must slightly retrace our steps, in order to mark the successive movements of the Socialistic party founded by Lassalle, and its relative position to the party attached to Karl Marx, their mutual approaches, and occasional departures from each other, ending in their final reunion at the Congress at Gotha in 1875: for this marks the close of an epoch, the final victory of the principles of the *International*, and the triumph of universal Communist principles over State Socialism and the more moderate demands of Lassalle.

For ten years after the death of Lassalle the party he had organised presented a lamentable spectacle of incapacity among the leaders, and mean jealousies and mutual suspicion in the rank and file of the party.

These internal divisions weakened the party and presented it in an unfavourable light before the world at large. Marx, although by reason of his intellectual superiority the natural head of the movement, was unwilling to become its acknowledged leader, and a small number of *rois fainéants* succeeded each other, from Becker, the immediate successor of Lassalle, styling himself the "President of Humanity," downwards, until Baron von Schwezer, a really able man, at last succeeded, in 1867, to supplant the lesser lights of the association in the presidential chair. "Then," says Mehring, the historian of the Social Democracy, and formerly one of its members, "the modern Alexander (*i.e.* Lassalle), who had gone out to conquer a new world of bliss, had found at last the one most worthy to become his successor."

But now too began the agitation of Liebknecht, the "Apostle of the International," and the intimate associate, and, some assert, the emissary of Karl Marx, to create opposition in Germany against the "Imperialist Socialism" of the followers of Lassalle, and to make propaganda among the German working men in favour of the unmitigated Communism of the more abstract scheme of International Socialists.

The ultimate result of these machinations was a

division of the Socialistic camp into two factions at the Congress at Eisenach in 1869, which continued to exist side by side until they were reunited at the Congress of Gotha by means of a compromise which, as we have already stated, practically amounted to a victory of the extreme party. The causes of this departure from the more moderate counsels of Lassalle may be traced partly to external events, and partly to internal government. The immediate cause was the misery among the labourers, occasioned by the swindle period of mercantile speculation which followed after the liquidation of the war indemnity paid by France to Germany, and the commercial crash which followed. Among the more remote influences may be mentioned the additional liberties granted to the people at the formation of the North German Confederation, liberties for which the former state of political tutelage had not prepared them sufficiently; the passing of laws permitting free combination among the men, which led to strikes, and the tumultuous movements to which they generally give rise; the sudden removal of former trade restrictions and the laws of settlement, which considerably disturbed existing economic relations, and caused unusual commotion among the masses; and, last of all, the establishment of manhood suffrage in the German Empire, which unexpectedly increased the political power of, and served as a handle for party purposes, and a stimulus for party organisation among, the members of the Social Democracy.

The absence of leaders equal in mental capacity to Lassalle gave the advantage to the opposite party, acting under the spiritual, though not nominal, supremacy of Karl Marx, and whose avowed adherents, moreover, were well represented in the press, and appeared on the scene as the wire-pullers of that supposed all-powerful society, that formidable bugbear of modern Europe, the *International*.

It is not to be wondered that this so-called secret society, which is supposed to have sent a thrill of trembling awe into the hearts of prominent statesmen, should exercise a fascinating influence over the bands of German labourers and their half-taught leaders.

This society, which, we are told on good authority, "was begun in a dream and terminated in a fiasco," had London for its birthplace and Karl Marx for its progenitor, as far, at least, as its official programme is concerned.*

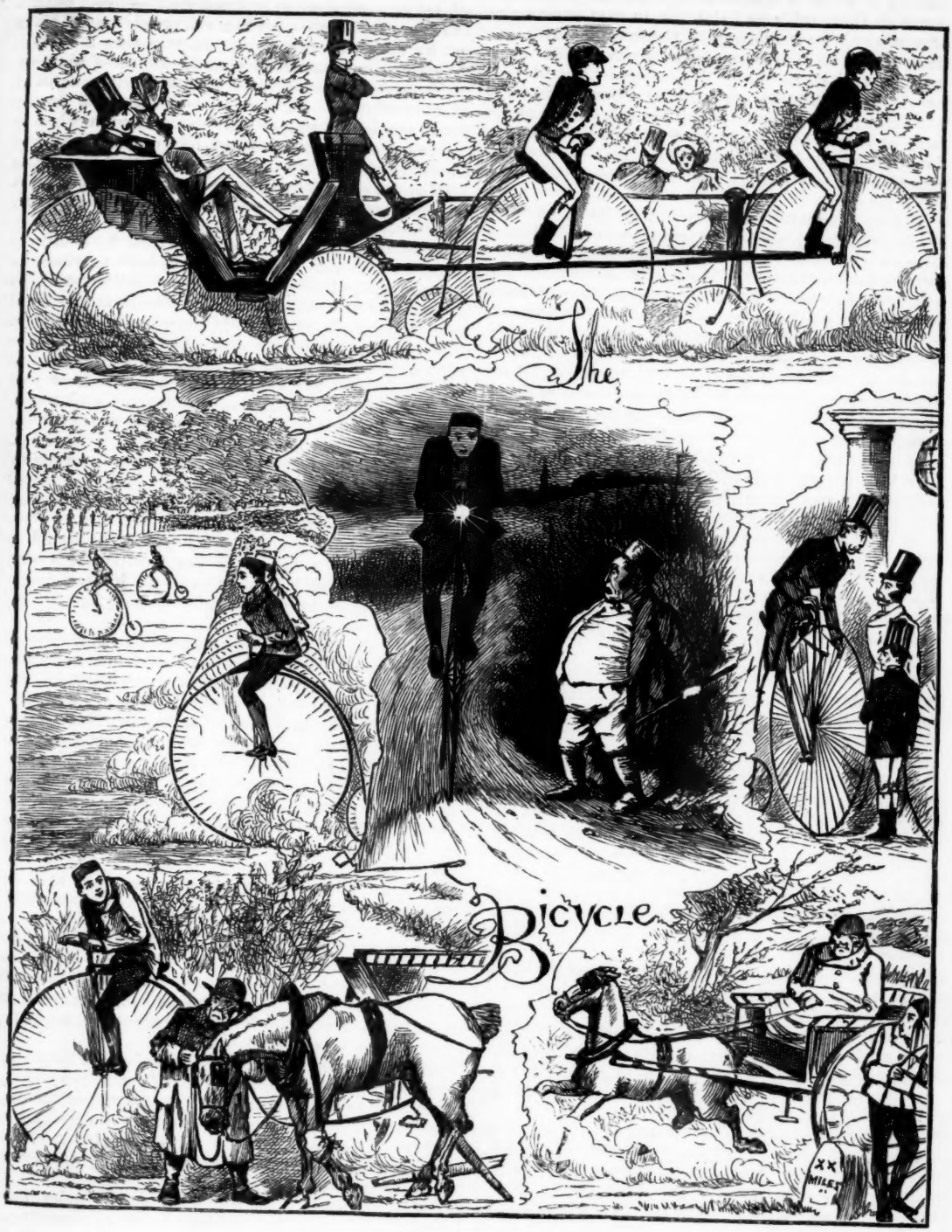
* Mr. Howell, in a valuable article on this subject in the "Nineteenth Century" for July, shows that this was not the first attempt of the kind in London, and mentions among the causes of its formation the following. "The proximate causes, briefly stated, which led to the formation of the 'International Working Men's Association' are these:—(1) The establishment of the Polish League, by means of which many of the continental workmen and refugees were brought into frequent contact with the leading political working men of London, when it was found that there were many points of agreement between the continental politicians and those in this country. (2) The outbreak of the war for Italian independence, which evoked a good deal of enthusiasm on the part of the working classes of England in favour of a free Italy, liberated alike from petty despots and from priestly domination. (3) The great strike and lock-out in the building trades in London in 1859-60, which created a considerable amount of sympathy on the continent of Europe in consequence of its being a struggle for a reduction in the hours of labour, and not a mere contest for extra or increased pay. A favourable opportunity was thus afforded for communications between the working-class leaders of London and the more intensely political workmen of the Continent. (4) The civil war in America, which kindled an enthusiasm in the hearts of most of the more active political leaders of the working classes in favour of the North, as against what they termed the slave-holding South, and which eventually led to the immense meeting in St. James's Hall on March 26, 1863, presided over by Mr. John Bright; this gave further opportunities for intercommunication between the continental workmen and those resident in London."

BICYCLING.

ALL doubts as to the permanency of the bicycle as an engine of locomotion have now disappeared. Many people thought that bicycling was a new fashion which would have its day like "rinking" with roller skates, and that the bicycle would become a curiosity like the "velocipede" and "dandy charger" of earlier years of this century. But it has become a fixed institution now. Bicycle clubs are in every part of the country. Bicyclists are numbered not by hundreds, but by thousands. "Bicyclists," says the "Times" in a recent leading article, "are become a power." They run races, with many starters, on our less frequented roads, and assemble occasionally in imposing numbers and military array at Hampton Court and other quiet localities. A procession of a thousand bicyclists is something for the imagination to fasten upon. Why, indeed, should we not have bicycle regiments to steal silently and rapidly on an unsuspecting foe ten or twenty miles off? To the ignorant beholders it sometimes looks as if the addition of physical power was dearly purchased at the cost of overstrained effort, and the too-continuous attention requisite. Certainly a bicyclist must be always on the watch. Bicyclists are aware they run dangers, and suffer a percentage of casualties; but they have counted the cost, and found it worth while running the risk.

The risks to bicyclists are of less consequence than risks to the public from the novel apparition on our highways. Horses, it must be admitted, do not like bicycles, but neither do they like railways, and probably would like street locomotives still less. But this cannot be taken into account as any hindrance to the common use of bicycles. Horses must get used to them, as they do to many unusual objects on the streets and roads. The chief complaint against the bicycle is made on behalf of the deaf, the lame, infancy, and old age. But these are the victims of all street traffic. They ought not to cross a street without using their eyes well, exercising the greatest caution, and condescending to ask assistance.

An almost superstitious terror, says the "Times," seems to attach to the silence of the bicycle, stealing on its doomed victim, as a police magistrate observed, like a thief in the night; and when the same gentleman described this formidable object as half man, half horse, he seemed to suggest a being that the police, and even the Legislature, might not venture to cope with. For all practical purposes, however, noise is a much greater nuisance than silence, and slowness a much greater nuisance than speed. The vehicles that make streets intolerable, and that destroy life by taking away the possibility of quiet by day and sleep by night, are heavy vans driven at full speed to catch trains, huge omnibuses sometimes under like urgency, tradesmen's carts rattling past all hours of the day, cabs as noisy as they can be made, and costermongers proclaiming their wares. On a deliberate comparison of public gain and loss, we sacrifice life, limb, and comfort wholesale to



A BICYCLE TANDEM.

THE MEET.

FIRST SIGHT OF A BICYCLE.

A MORNING CALL.

INCIDENTS OF THE ROAD.

carriers' vans, tradesmen's carts, and omnibuses, and nobody now but a madman would attempt to make our main thoroughfares habitable, in the proper sense of that word, by rendering the street traffic less positively inimical to vitality and existence. The same must be said of bicycles. It is so great a gain to a man if he can ride to his office on a bicycle, make a trip on it, or even a tour if he has the time, make calls, or simply indulge in the sense of rapid locomotion, that we are bound to give him the benefit of the general rule, and put up with the chance of a few accidents.

The bicyclist will have to submit to the same rules as all others, enjoying some vantage over foot passengers. He will have to use bells when required, little as they will help the deaf and the lame. He will have to use his eyes. Above all, he will have to bear in mind that in every thoroughfare, at almost any hour of the day, there will be a large proportion of stupid people, and a not very small proportion of people a little the worse for drink. Dram-drinkers can transact many kinds of business as well as other people—sometimes even better—but they are bad at crossing a thoroughfare. The Legislature would be very unfaithful to the courageous principles which have hitherto guided it in the treatment of discoveries and improvements if it showed any prejudice in this matter. That would be a great injustice to the men, most of them still young, who have won for themselves a great convenience, and no less pleasure, at no cost whatever, it may be said, and without drawing upon the common fund of the food of man. Society used to be divided into the equestrian and the pedestrian orders. These people have found a third rank.

For the protection of the public there must be legislation, but much must be left to unwritten law or custom. Even the rules of bicycle clubs leave some points open, and certain usages are left to the honour and good feeling of individual bicyclists. For instance, it should be reckoned a "caddish" thing for bicyclists to keep abreast or to run races with private or public carriages. It is certainly a "caddish" thing to be seen on our streets and roads on Sundays, especially when people are on their way to church. Even a Jew, if respectable, will not outrage public feeling by "Sunday bicycling" in frequented places.

The following remarks are the result of the practical experience of a doctor, who is also a bicyclist.

No one need fear to learn to ride who has the great blessing of sound heart and lungs and is free from rupture or a tendency to rupture. If the slightest doubt exists as to any of these points the would-be rider should consult his medical attendant before making even an attempt to learn, as otherwise he might develop a permanent malady, to say nothing of immediate risk to life.

The first beginning is by no means easy work, the exertion required to keep one's balance being considerable, and the beginner, when he has had half-an-hour's lesson, will be in as great a state of fatigue as an experienced rider who has finished a long race. This exertion causes the pulse and respiration to be considerably quickened, and should be risked only by those who are sound in heart and lungs.

The lessons should be taken easily, and for short periods at first, so that the learner may get used gradually to the unwonted effort, and then in a very short time practice brings ease and enjoyment in place of very hard work. A very usual mistake is for bicyclists to ride machines which are too large. The advice of good and experienced riders—never to have the leg at full stretch when riding—is amply borne out by surgical experience. In choosing a bicycle, the rider should ascertain that the *middle* of his foot, *under the instep*, touches the treadle during the *whole* of its revolution. In that case—as the ball of the great toe is the proper part to tread with when in action—the knee need never be quite straight, and consequently the hip-joint also is a little bent. This is of great consequence, as the strain upon the groin is considerable when the leg is forcibly straightened, and there is liability to rupture.

Another reason why it is dangerous to health to ride a bicycle with too long a tread is that, when the legs are obliged alternately to be at *full* stretch, the pressure of the saddle comes mainly on the front part of the fork, where it is least easily borne; in fact it is like riding on a rail. The body ought to be supported on the broad seat, and should rest on the hinder part of the saddle, not on the narrow part at the front, and it is impossible to avoid such a mistake if the treadle be not easily within reach of the rider during the whole of its revolution. Continued pressure on the front of the fork almost certainly causes abscesses and other troubles, which often entail life-long misery and ill-health. Too much attention cannot be drawn to this point.

Again, supposing a rider to be perfectly sound in health, to have a bicycle of the most suitable size, and to be a good rider, he may do himself incalculable harm by either riding too fast or for too long a period at once.

Taking the first objection, riding too fast: it is needless to do more than just glance at one element of danger, viz., that the greater the impetus with which any person, horse, or vehicle goes, the greater will probably be the smash in case of an upset. But another most strong objection to fast riding (apart from the danger to others) is that, like all other athletic exercises, unless the rider is in very good training and in excellent condition, he is sure to do harm to his heart and lungs; and even supposing him to be in such good condition and training he may easily overstrain his powers and do irremediable mischief to his constitution. Bicycle races, though very good in their way, have much to answer for, because all competitors are not judicious, and the spirit of emulation urges on some to exertions which are far too great. The real test of good riding is the *slow* race, where the prize is awarded to that man who comes in last without having fallen or dismounted, because it is much more difficult to keep the balance when going slowly than when going quickly.

Another injurious thing to be avoided is mounting the bicycle with a jump, instead of getting on quietly from step or treadle. Apart from the risk of missing the saddle, and so coming down to the ground or getting a severe strain in recovering balance, the sudden contact with the saddle is highly dangerous in more ways than one.

Having given these words of warning, the more pleasing task remains of pointing out the advantages which may be derived from this modern mode of locomotion. It would be almost impossible to invent any exercise more calculated to call into play every muscle of the body than bicycling does. The simple act of pointing the toes, as in standing on tip-toe, calls into play something like a dozen muscles of the

foot and leg; then the leg cannot be moved either backwards or forwards without using some powerful muscles which are attached to the trunk. The whole leg is at work in propelling the bicycle, and every muscle of the arms and body is constantly at work in retaining the balance and guiding the machine. The slight delay occasioned by dismounting to walk up hills is amply repaid by the rest (by change of movement) which is thus obtained between the periods of action. A rider may be sure that he is using too much exertion when he can hear or feel his heart beating (for no one ought to be conscious of the possession of a heart), or when he is at all short of breath. Under either of these conditions he ought either to diminish speed considerably, or, still better, to stop and rest.

Regular exercise, in some form or other, is essential to the good health of everybody. It is impossible to estimate how much biliousness, gout, indigestion, accumulation of fat, and various other maladies, are engendered by giving up active exercise, The boon of being able to mount the "iron horse" and get a peep of country and breaths of fresh pure air is immense to those who are employed all day in large towns, and who, but for this steed, could not get away far enough in the time they have to spare after work is done.

Bicycling is too firmly established as a recognised and favourite means of locomotion to be in the least danger of dying a natural death. Only let it be carefully used, *and not abused*, and the benefit to be derived from the exercise will be incalculable. Improvements in construction are presented to the public almost every month, and without doubt there will be still many improvements; possibly the friction will be in course of time reduced to such a slight degree that the present ease of riding will be greatly augmented. Anything in this direction will increase still more the healthiness of bicycling.

Before concluding, a few words on tricycles will not be out of place. As a matter of course, the friction is greater, and requires more power to overcome it than in the case of bicycles, but power is economised by not being required for balancing. Those who are too old or nervous to mount the two wheels, may ride snugly among the three with safety and great advantage to health, provided the foregoing cautions be observed.

LETTERS FROM THE ROCKY MOUNTAINS.

XVII.

Cheyenne, Wyoming, Dec. 12th.—The last evening came. I did not wish to realise it, as I looked at the snow-peaks glistening in the moonlight. No woman will be seen in the Park till next May. Young Lyman talked in a "hifalutin" style, but with some truth in it, of the influence of a woman's presence, how "low, mean, vulgar talk" had died out on my return, how they had "all pulled themselves up," and how Mr. Kavan and Mr. Buchan had said they would like always to be as quiet and gentlemanly as when a lady was with them. "By May," he said, "we shall be little better than brutes, in our manners at least." I have seen a great deal of the roughest class of men both on sea and land during the last two years, and the more important I think the "mission" of every quiet, refined, self-respecting woman, the more mistaken I think those who would forfeit it by noisy self-assertion, masculinity, or fastness. In all this wild West the influence of woman is second only in its benefits to the influence of religion, and where the last unhappily does not exist the first continually exerts its restraining power. The last morning came. I cleaned up my room and sat at the window watching the red and gold of one of the most glorious of winter sunrises, and the slow lighting-up of one peak after another. I have written that this scenery is not lovable, but I love it.

I left on Birdie at eleven o'clock, Evans riding with me as far as Mr. Nugent's. He was telling me so many things that at the top of the hill I forgot to turn round and take a last look at my colossal, resplendent, lonely, sunlit den, but it was needless, for I carry it away with me. I should not have been able to leave if Mr. Nugent had not offered his services. His chivalry to women is so well known that Evans said I could be safer and better cared for with no one. He added, "His heart is good and kind, as kind a heart as ever beat. He's a great enemy of his own, but he's been living pretty quietly for the last four years." At the door of his den I took leave of Birdie, who had been my faithful companion for more than seven hundred miles of travelling, and of Evans, who had been uniformly kind to me and just in all his dealings, even to paying me at that moment the very last dollar he owed me. May God bless him and his! He was obliged to return before I could get off, and as he commended me to Mr. Nugent's care, the two men shook hands kindly.*

Rich spoils of beavers' skins were lying on the cabin floor, and the trapper took the finest, a mouse-coloured kitten beaver's skin, and presented it to me. I rode his beautiful Arab mare, whose springy step and long easy stride was a relief after Birdie's short sturdy gait. We had a very pleasant ride, and I seldom had to walk. We took neither of the trails, but cut right through the forest to a place where, through an opening in the foothills, the plains stretched to the horizon covered with snow, the surface of which, having melted and frozen, reflected as water would the pure blue of the sky, presenting a complete optical illusion. It required my knowledge of fact to assure me that I was not looking at the ocean. "Jim" shortened the way by repeating a great deal of poetry, and by earnest, reasonable conversation, so that I was quite surprised when it grew dark. He told me that he never lay down to sleep without prayer—prayer chiefly that God would give him a happy death. He had previously promised that he would not hurry or scold, but "fyking" had not been included in the arrangement, and when in the early darkness we reached the steep hill, at whose foot the rapid deep St. Vrain flows, he

* Some months later "Mountain Jim" fell by Evans's hand, shot from Evans's doorstep while riding past his cabin. The story of the previous weeks is dark, sad, and evil. Of the five differing versions which have been written to me of the act itself and its immediate causes it is best to give none. The tragedy is too painful to dwell upon. "Jim" lived long enough to give his own statement, and to appeal to the judgment of God, but died in low delirium before the case reached a human tribunal.

"fyked" unreasonably about me, the mare, and the crossing generally, and seemed to think I could not get through, for the ice had been cut with an axe, and we could not see whether "glaze" had formed since or no. I was to have slept at the house of a woman farther down the canyon, who never ceases talking, but Miller, the young man whose attractive house and admirable habits I have mentioned before, came out and said his house was "now fixed for ladies," so we stayed there, and I was "made as comfortable" as could be. His house is a model. He cleans everything as soon as it is used, so nothing is ever dirty, and his stove and cooking gear in their bright parts look like polished silver. It was amusing to hear the two men talk like two women about various ways of making bread and biscuits, one even writing out a recipe for the other. It was almost grievous that a solitary man should have the power of making a house so comfortable! They heated a stone for my feet, warmed a blanket for me to sleep in, and put logs enough on the fire to burn all night, for the mercury was eleven below zero. The stars were intensely bright, and a well-defined auroral arch, throwing off fantastic coruscations, lighted the whole northern sky. Yet I was only in the foothills, and Long's glorious Peak was not to be seen. Miller had all his things "washed up" and his "pots and pans" cleaned in ten minutes after supper, and then had the whole evening in which to smoke and enjoy himself—a poor woman would probably have been "fussing round" till ten o'clock about the same work. Besides Ring there was another gigantic dog craving for notice, and two large cats, which, the whole evening, were on their master's knee. Cold as the night was, the house was chinked, and the rooms felt quite warm. I even missed the free currents of air which I had been used to! This was my last evening in what may be called a mountainous region.

The next morning, as soon as the sun was well risen, we left for our journey of thirty miles, which had to be done nearly at a foot's pace, owing to one horse being encumbered with my luggage. I did not wish to realise that it was my last ride, and my last association with any of the men of the mountains whom I had learned to trust, and in some respects to admire. No more hunters' tales told while the pine knots crack and blaze; no more thrilling narratives of adventures with Indians and bears; and never again shall I hear that strange talk of Nature and her doings which is the speech of those who live with her and her alone. Already the dismalness of a level land comes over me. The canyon of the St. Vrain was in all its glory of colour, but we had a remarkably ugly crossing of that brilliant river, which was frozen all over, except an unpleasant gap of about two feet in the middle. Mr. Nugent had to drive the frightened horses through, while I, having crossed on some logs lower down, had to catch them on the other side as they plunged to shore trembling with fear. Then we emerged on the vast expanse of the glittering plains, and a sudden sweep of wind made the cold so intolerable that I had to go into a house to get warm. This was the last house we saw till we reached our destination that night. I never saw the mountain range look so beautiful—uplifted in every shade of transparent blue, till the sublimity of Long's Peak, and the lofty crest of Storm Peak, bore only unsullied snow against the sky. Peaks gleamed in living light; canyons lay in depths of purple shade; a hundred miles away Pike's Peak rose a lump of blue, and over all, through that glorious afternoon, a veil of blue spiritualised without dimming the outlines of that most glorious range, making it look like the dreamed-of mountains of "the land which is very far off," till at sunset it stood out sharp in glories of violet and opal, and the whole horizon up to a great height was suffused with the deep rose and pure orange of the afterglow. It seemed all dream-like as we passed through the sunlit solitude, on the right the prairie waves lessening towards the far horizon, while on the left they broke in great snowy surges against the Rocky Mountains. All that day we neither saw man, beast, nor bird. "Jim" was silent mostly. Like all true children of the mountains, he pined even when temporarily absent from them.

At sunset we reached a cluster of houses called Namaqua, where, to our dismay, we heard that there was to be a dance at the one little inn to which we were going at St. Louis. I pictured to myself no privacy, no peace, no sleep, drinking, low sounds, and worse than all, "Jim" getting into a quarrel and using his pistols. He was uncomfortable about it for another reason. He said he had dreamt the night before that there was to be a dance, and that he had to shoot a man for making "an unpleasant remark"! For the last three miles which we accomplished after sunset the cold was most severe, but nothing could exceed the beauty of the afterglow, and the strange look of the rolling plains of snow beneath it. When we got to the queer little place where they "keep strangers" at St. Louis, they were very civil, and said that after supper we could have the kitchen to ourselves. I found a large, *prononcée*, competent, bustling widow, hugely stout, able to manage all men and everything else, and a very florid sister like herself, top-heavy with hair. There were besides two naughty children in the kitchen, who cried incessantly, and kept opening and shutting the door. There was no place to sit down but a wooden chair by the side of the kitchen stove, at which supper was being cooked for ten men. The bustle and clatter were indescribable, and the landlady asked innumerable questions, and seemed to fill the whole room. The only expedient for me for the night was to sleep on a shakedown in a very small room occupied by the two women and the children, and even this was not available till midnight, when the dance terminated; and there was no place in which to wash except a bowl in the kitchen. I sat by the stove till supper, wearying of the noise and bustle after the quiet of Estes Park. The landlady asked, with great eagerness, who the gentleman was who was with me, and said that the men outside were saying that they were sure that it was "Rocky Mountain Jim," but she was sure it was not. When I told her that the men were right, she exclaimed, "Do tell! I want to know! that quiet, kind gentleman!" and she said she used to frighten her children when they were naughty by telling them that "he would get them, for he came down from the mountains every week, and took back a child with him to eat!" She was as proud of having him in her house as if he had been the President, and I gained a reflected importance! All the men in the settlement assembled in the front room, hoping he would go and smoke there, and when he remained in the kitchen they came round the window and into the doorway to look at him. The children got on his knee, and, to my great relief, he kept them good and quiet, and let them play with

his curls, to the great delight of the two women, who never took their eyes off him. At last the bad-smelling supper was served, and ten silent men came in and gobbled it up, staring steadily at "Jim" as they gobbled. Afterwards there seemed no hope of quiet, so we went to the post-office, and while waiting for stamps were shown into the prettiest and most ladylike-looking room I have seen in the West, created by a pretty and refined-looking woman. She made an opportunity for asking me if it were true that the gentleman with me was "Mountain Jim," and added that so very gentlemanly a person could not be guilty of the misdeeds attributed to him. When we returned the kitchen was much quieter. It was cleared by eight, as the landlady promised; we had it to ourselves till twelve, and could scarcely hear the music. It was a most respectable dance, a fortnightly gathering got up by the neighbouring settlers, most of them young married people, and there was no drinking at all. I wrote to you for some time, while "Jim" copied for himself the poems "In the Glen" and the latter half of "The River without a Bridge," which he recited with deep feeling. It was altogether very quiet and peaceful. He repeated to me several poems of great merit which he had composed, and told me much more about his life. I knew that no one else could or would speak to him as I could, and for the last time I urged upon him the necessity of a reformation in his life, beginning with the giving up of whisky, going so far as to tell him that I despised a man of his intellect for being a slave to such a vice. "Too late! too late!" he always answered, "for such a change." Aye, *too late*. He shed tears quietly. "It might have been once," he said. Aye, *might* have been. He has excellent sense for every one but himself, and, as I have seen him, a gentleness, propriety, and considerateness of manner surprising in any man, but especially so in a man associating only with the rough men of the West. *Too late*. As I looked at him, I felt a pity such as I never before felt for a human being. My thought at the moment was, Will not our Father in heaven, "who spared not His own Son, but delivered Him up for us all," be far more pitiful? For the time a desire for self-respect, better aspirations, and even hope itself entered his dark life; and he said, suddenly, that he had made up his mind to give up whisky and his reputation as a desperado. *Too late*. A little before twelve the dance was over, and I got to the crowded little bedroom, which only allowed of one person standing in it at a time, to sleep soundly and dream of "ninety-and-nine just persons who need no repentance." The landlady was quite taken up with her "distinguished guest." "That kind, quiet gentleman, Mountain Jim!" "Well, I never! he must be a very good man!"

Yesterday morning the mercury was 20° below zero. I think I never saw such a brilliant atmosphere. That curious phenomena called frost-fall was occurring, in which whatever moisture may exist in the air somehow aggregates into feathers and fern-leaves, the loveliest of creations, only seen in rarefied air and intense cold. One breath and they vanish. The air was filled with diamond sparks quite intangible. They seemed just glitter and no more. It was still and cloudless, and the shapes of violet mountains were softened by a veil of the tenderest blue. When the Greeley stage-waggon came up Mr. ——, whom I met at L—— C——, was on it. He had expressed a great wish to go to Estes Park, and to hunt with "Mountain Jim," if it would be safe to do the latter. He was now dressed in the extreme of English dandyism, and when I introduced them he put out a small hand cased in a perfectly-fitting lemon-coloured kid glove. As the trapper stood there in his grotesque rags and odds and ends of apparel, his innate gentlemanliness brought into relief the innate vulgarity of a rich *parvenu*.* Mr. —— rattled so amusingly as we drove away that I never realised that my Rocky Mountain life was at an end, not even when I saw "Mountain Jim," with his golden hair yellow in the sunshine, slowly leading the beautiful mare over the snowy plains back to Estes Park, equipped with the saddle on which I had ridden 800 miles!

A drive of several hours over the plains brought us to Greeley, and a few hours later, in the far blue distance, the Rocky Mountains, and all that they enclose, went down below the prairie sea.

* This was a truly unfortunate introduction. It was the first link in the chain of circumstances which brought about Mr. Nugent's untimely end, and it was at this person's instigation (when overcome by fear) that Evans fired the shot which proved fatal.

THE CHEMISTRY OF THE HEAVENLY BODIES.

BY DR. J. H. GLADSTONE, F.R.S., PRESIDENT OF THE CHEMICAL SOCIETY.

CHAPTER II.—STARS AND METEORITES.

WHILE our knowledge of the chemical nature of the larger planets is very small indeed, and that of the 192 minor planets is absolutely nothing, we can form a better idea of the fixed stars. The question contained in the familiar verse,

> "Twinkle, twinkle, little star,
> How I wonder what you are?
> Up above the world so high,
> Like a diamond in the sky,"

has been answered by the light which they emit. The principal workers in this direction have been Dr. Huggins and Father Secchi, and they inform us that about half of the stars visible to the naked eye are white, with perhaps a bluish tinge, and exhibit a continuous spectrum with the four dark lines of hydrogen very strongly marked. At the same time there are fainter indications of magnesium, sodium, iron, and other bodies with which we are familiar in the sun. Figure 5 represents the spectrum of Sirius, the dog-star. It is believed from independent evidence that this star and some of its compeers are actually brighter than our own sun; and the spectroscopic evidence indicates that they are worlds analogous to it, but still more elevated in temperature. About one-third of the visible stars, of which Arcturus is an example, are somewhat yellowish in colour, and give spectra indicating many of the same elements as are found in our sun, such as magnesium and sodium.

One of these, Aldebaran, appears to contain also in its atmosphere mercury, antimony, bismuth, and tellurium, which have not been recognised among the constituents of our luminary. Another group are generally reddish in colour, and their spectra indicate a large amount of absorption, often appearing like grooved spaces. One of these, α of Orion, is represented in fig. 6. As the light of these stars bears some resemblance to that of the sun-spots, they are considered to be lower in temperature than the general surface of our sun. This, however, does not exhaust the variety of fixed stars. There are some very faint ones, the spectra of which are characterised by three bright bands of green and blue. In a few the hydrogen lines are bright, instead of dark; and in star η of Argo, magnesium, sodium, and nitrogen are also luminous.

There are also other ways in which it is true that "one star differeth from another star in glory." There are double stars, the colours of which are strongly contrasted, and this difference seems to be due to the absorption of their atmospheres. There are many variable stars, principally of the kind that give such spectra as that of fig. 6, and these exhibit changes in the dark bands from one period to another. There are also temporary stars which have suddenly appeared in the heavens, and afterwards disappeared, or nearly so. Two of these that have shone forth since the introduction of spectrum analysis have been examined, and both exhibited a brilliant display of bright hydrogen lines, and an increased luminosity of the ordinary spectrum. Fig. 7 represents the spectroscopic appearance of one of these two stars—τ Coronæ Borealis. In a few days the bright lines had faded, and we are left to speculate on the possible cause of this outburst of heated hydrogen.

The spectroscope has also decided the question that those cloud-like masses called *nebulæ* are not merely clusters of separate stars as yet unresolved by our telescopes. A true nebula generally gives as its spectrum three bright lines, probably crossing a small continuous spectrum, as represented in fig. 8. Two of these are the brightest lines of hydrogen and nitrogen, while the third is yet undetermined. This clearly indicates that the nebula is a strongly heated mixture of gases, with generally more or less of a liquid or solid nucleus.

But there are other heavenly bodies much nearer to our own earth which must claim our attention. Every one must have remarked, on a clear night, how

> "Certain stars shot madly from their spheres;"

but there are times when such shooting-stars appear in great numbers. Every year showers take place about the 10th of August and the 13th of November, but the shower of the latter date is greatest at intervals of thirty-three years, the last maximum being in 1866. There is no question but that these displays take place within the limits of our atmosphere, and the annual periodicity of the showers shows that these small bodies are moving in orbits cut by that of the earth. It is a remarkable fact that several of them seem to be coincident with the orbits of known comets. Whether they are portions of the tails of comets or not, the nature of the light which they emit shows that they are solid particles. Although they have no light of their own, they become luminous when they come in contact with our atmosphere, for they fly along with a velocity of thirty or forty miles per second—one hundred times the speed of a cannon-ball—and the effect of this rapid passage is to heat them very intensely. As there is no clear evidence of any portions of these showers having ever reached the earth, the probability is that they are entirely burnt either to fine powder or gas. The light from the August shooting-stars has given indications of the yellow rays of sodium, and in those of November the green rays of magnesium have been detected.

At uncertain periods, also, large meteors are frequently seen to pass across the sky. These fall to pieces and leave coloured sparks or luminous streaks behind them, and sometimes detonate and throw down solid masses to the earth. The fall of these stones from heaven was frequently affirmed in ancient times, and the stones themselves were had in great reverence, as in the case of the palladium of Troy, or the "image which fell down from Jupiter" at Ephesus. But the reality of such improbable events was doubted afterwards, until the large number of thoroughly attested instances which occurred about the beginning of this century left no question as to their being facts. The finest collection of these meteorites is in our own British Museum, where the catalogue enumerates specimens of about 320 falls. They vary in size from one found at Melbourne, weighing three and a-half tons, to others that are merely small grains. Sometimes they have fallen in solitary masses, as in the case of a piece of almost pure iron, weighing nine pounds, which fell in a field near Wellington, Shropshire, in April, 1876. More frequently they have been seen to burst in the upper atmosphere, and to throw down fragments over a considerable extent of country. This was especially the case at L'Aigle, in Normandy, where, on a fine afternoon in 1803, hundreds of pieces were flung down in the sight of the astonished inhabitants; and at Pultusk, in Poland, where, on the evening of the 30th of January, 1868, a meteor, having a real speed of thirty-five miles per second, ran a course of a hundred and fifteen miles, burst when twenty-five miles above the earth with a light which was visible in distant countries, and showered down thousands of small black pellets. Since these meteorites have usually broken into fragments while in the air, their original form can scarcely be ascertained, but it is easy to determine their chemical composition. The most invariable constituent is metallic iron, and this is mixed with nickel, and frequently with smaller quantities of cobalt, chromium, and manganese. The iron is usually associated with certain minerals, which it frequently encloses as a metallic network. The minerals are usually silicates of magnesium, calcium, and aluminium. Other metallic elements have also occasionally been found in small quantity—copper, tin, vanadium, titanium, sodium, potassium, and lithium. Oxygen, of course, forms part of these minerals, while sulphur and phosphorus are common, and chlorine is a rare constituent. Besides this, many of these stones contain carbon, either in the form of blacklead, or in combination with hydrogen or oxygen; and when the iron is heated it frequently gives out some amount of hydrogen and carbonic oxide gases. No element has yet been found in any of them which is unknown upon the earth, but the manner in which the elements are combined is very different from that of terrestrial minerals. Thus the iron is found in a metallic condition, with a peculiar internal structure, and is usually accompanied by a phosphide of iron and nickel, and a ferrous sulphide,

both well crystallised compounds never found in the earth. Other combinations unknown elsewhere occur among the mineral constituents, in addition to the well-known olivine and felspar. These mixtures of iron and crystallised silicates have evidently been formed under circumstances very different from those that usually obtain in the known parts of our globe. The appearance of these celestial stones frequently suggests the idea of a large number of rounded pellets of olivine or other mineral having been shot into a mass of molten iron which has afterwards hardened around them. Though it is difficult to identify these meteoric stones with the showers of shooting-stars, and thus with the tails of comets, it is not easy to draw the line of distinction between them and the occasional shooting-stars, and there is not much doubt that their orbits are connected with the sun rather than the earth. Even supposing that they are satellites of our own, the peculiarities of their chemical composition clearly shows that they may be looked upon as independent members of the solar system.

CHAPTER III.—GENERAL CONCLUSIONS.

The observations of the last few years, the main results of which have been briefly given in the previous chapters, have largely extended our knowledge, and have given more definiteness to our conceptions of the physical universe. One conclusion that cannot fail to strike us is the general unity of composition which runs throughout these various heavenly bodies. For anything we knew previously, one star might have been made wholly of one substance, and another star wholly of another, and the materials of which the sun is made might have been quite different from that of the ground on which we tread. Instead of this, we find that, as far as our vision can penetrate, the various worlds are built up to a large extent of the same elements—iron, magnesium, sodium, and so forth; while hydrogen, the lightest of our known gases, has been detected, I believe, in every star and nebula that has been examined. Sometimes this substance is extremely prominent, as in Sirius; at other times the indications have been very faint, as in α of Orion, where at first it was not recognised. The most remarkable instance of dissimilarity is perhaps the apparent absence of nitrogen from the solar atmosphere. I have little doubt, however, that it does exist there in some form, and will eventually be detected.

Beside this general unity of composition, there is a remarkable similarity of structure. The heavenly bodies may be generally described as a central nucleus, composed of solid or liquid matter, or of dense cloud, and surrounded by an atmosphere. Sometimes, as in the generality of the nebulæ and in our sun, this atmosphere is of very large extent; at other times, as with our earth, it is very limited. There are, however, nebulæ which appear to be all atmosphere, while astronomers assert that our moon has no gaseous envelope. The meteorites, even, are probably little worlds of a similar structure, it being not unlikely that, while in the heavenly spaces, these solid masses of mineral are surrounded by an atmosphere of hydrogen and other gases identical with those which we find condensed in the iron of which they are composed. This similarity of structure exists notwithstanding enormous differences of size—such as between the sun and a shooting star—and is accompanied by great differences of temperature. It also exists along with considerable differences of chemical composition, and specific gravity. There is, however, a modification of the structure which must not be overlooked. In some cases the solid matter, instead of being concentrated in one mass, with perhaps a satellite or two, forms a stream of disconnected particles moving together in the same orbit. The most remarkable instances of this are the comets and Saturn's rings, but something analogous is seen in the sun's zodiacal light, the asteroids, and, on a more gigantic scale, in the milky-way. This modified structure does not exclude the idea of an interpenetrating atmosphere; indeed, we have evidence of such an envelope in the glowing heads of comets.

What chemical substances will be solid or liquid, and what gaseous, will depend very much upon the temperature of the particular world on which they occur. Thus it is conceivable that in some of the nebulæ such refractory bodies as gold and platinum exist without being condensed; in our sun, we know that iron, nickel, and sodium are volatile, while in our earth these are fixed bodies. Moreover, our atmosphere contains a substance—water—whose physical condition is so uncertain that with slight changes of temperature it is always passing from one state to the other, while carbonic acid, oxygen, and nitrogen are always gaseous. It is no great stretch of imagination to suppose that there may be some cold and distant planet in which carbonic acid, and even the other two gases, frequently fall as snow; and we may push the same thought so far as to conceive of a globe which has cooled to such an extent that even its hydrogen atmosphere has been frozen.

These discoveries have gone far to establish the nebular theory of the origin of worlds. When that hypothesis was first brought before me in the writings of a pious astronomer long before the days of spectrum analysis, I was disposed to accept it, not only on account of its appearance of truth, but also because it seemed so entirely in consonance with that slow and gradual progress towards perfection which is visible in all parts of the Creator's work, and not least in the revelation of His word. It will be easily understood, then, that all these phenomena present themselves now to my mind as the successive stages of one Divine mode of action, and that they give an additional and fresh meaning to the words of the psalmist—"The heavens declare the glory of God, and the firmament showeth His handiwork."

The theory may be thus explained. The solar system was once a gigantic mixture of gases at an intense heat, similar to what we have reason to believe is the case with some of the nebulæ at present. This fire-mist, which extended beyond the present orbit of Neptune, as it gradually cooled and gravitated together assumed more or less of a spiral or circular motion, as we see in existing nebulæ; and the more condensable elements thickened into cloud or hardened into nuclei. The great mass fell towards the centre of gravity of the whole system, as seems to be the case in most of the nebulæ, while successive condensations of other elements took place in more remote regions, and, forming also into globes, eventually produced the planets. These, during their condensation, gave rise in a similar way to their satellites, and the small particles which in various ways float about the solar system. Sometimes, too the condensation would assume rather the appearance of a stream of frozen particles—or even a ring of them, as in the case of Saturn's environments. At the same time, the more permanent gases would re-

main as such, but be drawn towards the heavier globes, forming atmospheres around them. Under this view the central sun must be composed of the least volatile and the heaviest elements, but will always contain small portions of the rest, especially near its surface, while the more volatile and lighter constituents will range themselves roughly at greater distances from it. This is fully in accordance with what we know of the actual chemical composition of our great luminary, with the fact that the densities of the planets follow this order, and that the earth, while it contains elements which differ very greatly in weight in the gaseous condition, has a largely preponderating amount of those which are lighter.

The nebular theory is of course not to be restricted to the solar system. If it be the true representation of what is happening, we have before us at the present moment the grand spectacle of a universe of worlds composed of similar materials and in every stage of progress. We see the fire-mist, and can trace its gradual condensation. We see the suns, sometimes single and central, at other times binary or ternary and revolving about one another, and can reasonably imagine that they have planets like our own. We observe, too, that some of these suns are far hotter than ours, while others experience great changes before our very eyes. In the universe there are probably many worlds, like our sun, still the abode of fire and inconceivably violent tempests; others, like our own earth, which have been gradually brought from a chaos into a cosmos, and fitted for the abode of vegetable and animal life; and others, again, like our moon, which appear to have passed beyond that stage, and to have become dry and lifeless—unless, indeed, they be inhabited by creatures whom the Divine beneficence has fitted for conditions widely different from our own.

Varieties.

THE LATE MR. JUSTICE KEOGH.—The prosecution of Father Pelitonni, in Dublin, for burning a Bible, which Mr. Keogh, in the discharge of his official duty, felt bound to institute, and the strong terms in which he reprobated the act, excited a very strong feeling of disappointment and vexation against him among the lower class of Roman Catholics and a portion of the clergy. After his promotion to the Bench, the strong constitutional tone which characterised his judicial utterances, and the severe sentences which he thought it his duty to pass upon the Fenian prisoners, further exasperated the populace; and the Galway judgment, in which he dealt in such trenchant terms with the intimidation committed by the clergy in carrying the election of their favourite, was his crowning offence. It completely alienated from him whatever remnant he retained of the prelates and priests, and excited their furious animosty. The two parties which in Irish politics take separate lines—the Clerical and the extreme Nationalist—were united in hatred of him, and they spared no opportunity or means to hold him up to popular execration, each using his political or judicial offices as they suited, to inflame the minds of the public against him.—*The Times.*

POCKET PLANT-CASE FOR LADIES.—Some ladies who are remarkably fond of gardening, and particularly of raising plants from seed, compelled to reside principally in London, where they have no garden, have contrived a very ingenious substitute for a hot-bed, by having recourse to their side pockets as a source of heat for germinating seeds. The seeds, enveloped in some moist moss, are put into a small tin case, commonly one which has been used for lozenges or acidulated drops. The case, so filled, is carried about the person constantly during the day, and put with the pocket under the pillow during the night. When the seeds have germinated, and the plumule, as well as the radicle, has appeared, having now become young plants, they are taken out of the tin case and planted in pots. These same ladies have also germinated seeds by suspending them over water in a hyacinth glass or a small *carafe;* and in this manner they have raised trees from filberts, which, being afterwards planted in the open ground in the country, have, in the course of a few years, borne fruit. They have also raised oaks, sweet chestnuts, and various other plants. Δ.

A MARTIAL COUNTY.—Within a radius of little more than five miles the county of Surrey contains all the localities in which the British officer's career is spent from the beginning to its end. There is Wellington College, where the time of the boy-aspirant is divided between cricket and cramming; then comes Sandhurst, where careful culture coaxes the young plants to put forth tender buds for the final examination; the full-blown sub-lieutenant blooms at Aldershot, within a stone's throw; when tired of regimental life, mess dinners, and slow promotion, he submits to a severe course of training at the Staff College; but soured by being constantly passed over in favour of men who have learned less but have more friends, and exhausted by over-study, his brain gives way. Fortunately, Broadmoor Asylum is handy, and he leaves it only to lay his bones in Woking Cemetery.—*Vanity Fair.*

SNORING.—An American doctor has invented an anti-snoring machine. It is a night-cap fitting the head snugly; a cap of soft material fitting the chin; and a piece of elastic webbing tacked to the chin piece, and to the head-cap near the ears. The webbing can be made more or less tense as may be required to effect the closure of the mouth. The unnatural current through the mouth, meeting the proper air-draught of the nostrils, affects the uvula, and contracts the air-passage, causing snoring. People do not noisily snore with the mouth closed.

AN IRON CARRIAGE.—Coachbuilders intermix iron with wood, but Mr. Alexander Jamieson, of Berlin, in the Maryborough district, has constructed a buggy consisting exclusively of iron and steel. For instance, in place of hickory spokes and oak felloes, he has employed wrought-iron tubes and T iron. The tubes fit into the axle-box at one end and are riveted to the T iron at the other. The first noticeable effect has been to add to the weight of the vehicle. This has accrued in spite of the thinness of the parts. The cost also has been enhanced. The extra weight is not considered important by the maker, in view of the strength which must result from the use of iron in place of wood, nor should it be felt, once a start is made, except in the ascent of hills. Strength and durability are regarded as a full equivalent for the increase of cost, and to belong to that form of expensiveness which proves cheapness in the long run. The vehicle has a neat look, and an appearance, if not a reality, of lightness.—*Melbourne Argus.*

GEORGE HERBERT AND HIS WIFE.—George Herbert was a saintly man, a sweet poet, and a zealous minister, but he was as queer a bridegroom as Calvin or Wesley. His first address to Jane Danvers, whom his friends had wooed for him, on returning to the parsonage at Bemerton, are said to have been these words: "You are now a minister's wife, and must now so far forget your father's house as not to claim a precedence of any of your parishioners; for you are to know that a priest's wife can challenge no precedence or place but that which she purchases by her obliging humility; and I am sure places so purchased do best become them, and let me tell you that I am so good a herald as to assure you that this is truth."

AGRICULTURAL PROGRESS IN ENGLAND.—The importation of fresh meat from America is likely to give new stimulus to the British farmer, as did the repeal of the Corn Laws in other days. Mr. Mechi has recently stated his conviction that if more capital were invested in the land, and if better farming prevailed, England could be yet independent of foreign imports, whether of corn or meat. At present there are 46,000,000 acres in this country, and 32,000,000 inhabitants, and only 40 per cent. of those 32,000,000 are fed with British food, and the 60 per cent. would be without their bread and a good deal of their meat, butter, and cheese but for foreign imports. "This," says Mr. Mechi, "is not a creditable state of things. In the first place, farmers must improve the management of their cattle by providing covered yards, and so making meat at a larger profit than with open yards. Landlords must greatly enlarge the liberty of action of their tenants, for if there were to be more capital invested in the cultivation of the soil farmers must have greater freedom of action. Mighty steam must do for agriculture what it has done for the manufacturing interest."